Instant-Runoff Voting and Attitudes on Democracy in the United States: Results from a Laboratory Experiment[*]

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Periodically, interest groups and members of the political commentariat call for the United States to abandon its plurality voting system for another alternative, such as instant-runoff voting (IRV), in the name of making elections fairer and more representative of citizens' preferences. Several cities and municipalities currently use IRV in local elections, though it has not been tested in any state or federal elections in the U.S. IRV is also used in nation-wide elections in several countries. While research has shown that IRV encourages the election of more moderate candidates and candidates from outside the two-party system, encourages sincere voting, and can reduce election administration costs, the method of tallying votes is much less transparent than in a plurality- or majority-vote system. Thus, there may be drawbacks to adopting a different electoral system in the U.S. The widespread adoption of IRV in the U.S. would require a fundamental shift in the way that elections are administered and, perhaps more importantly, the way that voters express their preferences in elections. When votes are counted in a way that voters are not used to, it may negatively impact their confidence in the accuracy and fairness of elections and their sense of democratic legitimacy. This suggests that electoral systems have the potential to impact voter behavior, especially their attitudes towards elections.

This paper reports the results of an experiment designed to test the effect that IRV has on voters' attitudes on the fairness and accuracy of elections. Using the Omnibus Political Science Survey at the University of California, San Diego, I collected data on the ways that voters respond to voting under plurality and IRV rules. I find that IRV does have a statistically significant impact on voters' attitudes and their confidence that ballots are counted correctly. I detail how IRV has been implemented in some municipalities in the U.S. and how voters have responded to it, and I also discuss some of the normative implications of IRV and some possible limitations to its widespread adoption in the United States.

Theoretical Overview

There is a very extensive literature in political science on the effects of different types of electoral systems[1] on electoral outcomes. The literature on this topic examines three main variables (Taagepera and Shugart 1989): ballot type (which describes how many votes voters can cast and how they may divide them among candidates or parties), district magnitude (which is the number of seats allotted to a district, which can be identical among all districts in a polity or vary among them), and allocation formula (which refers to how votes, once gathered, are translated into seats). Instant-runoff voting, which I focus on, encompasses both ballot type and allocation formula. While much of the literature on IRV focuses on its institutional outcomes, my aim is to examine the effects it might have on the behavior of voters.

Different electoral systems allow their citizens to cast different numbers of votes for electoral offices—two of the most basic ballot types are categorical ballots, which allow voters to choose only one party or candidate per office, and ordinal ballots, which allow voters to rank-order multiple candidates or parties.[2] There are three allocation formulas that are used in most single-member district elections. Plurality rule (colloquially known as "first past the post") requires that the winner must get more votes than the other candidate(s) in the election; this system is used in Canada, the U.S., the UK, India, and, before its 1996 electoral reforms, New Zealand. The second type, majority rule, requires that a winning candidate earn more than 50 percent of the vote. If no candidate achieves this on the first round of balloting, these systems often employ a second round of elections that are restricted to the top candidates from the first

[1] An electoral system may be understood as a set of rules that structure how votes are cast at elections for a representative assembly and how these votes are then converted into seats in that assembly (Gallagher and Mitchell 2005, Cox 1997). This definition of electoral systems does not include topics more broadly categorized under the heading of electoral regulations, such as ballot access, campaign laws, etc.

[2] There are a host of other types of balloting systems, especially for multi-tiered systems or mixed-member systems; however, the nature of my research questions allows me to restrict my analysis to categorical and ordinal ballots in single-member districts.

round of elections.[3]. The third type, ordinal or preferential ballots, allows voters to rank-order candidates for office, and the votes they cast are allocated to their favorite candidate(s) accordingly. This system allows for instant-runoff voting, wherein the lowest ranking candidates are eliminated and their votes are redistributed to candidates that the voter ranked higher; this process is repeated until a winner with a majority of the votes emerges. What makes this type of preferential voting "instant" is that all preferences are recorded on a single ballot, eliminating the need to hold a separate election if no candidate achieves a majority of the vote on the first round. IRV is used primarily in Australia, where it is called the alternative vote, and also in some smaller-scale elections in Canada, Fiji, Ireland, New Zealand, and Papua New Guinea.

IRV systems have many advantages. Because a majority of voters must express some sort of preference for the candidate that is ultimately elected, the winner is less likely to be an extreme or fringe candidate; many comparative studies of IRV find that it leads to the election of more moderate candidates (Taylor 1974, Reilly 2002) and, in traditionally two-party systems, a higher likelihood of electing a candidate from outside the two-party hegemony. This may help mitigate conflict in societies that are deeply divided along ethnic lines (Reilly and Reynolds 1999).[4] Because multiple candidates of the same party can run on one ballot, IRV encourages a personal vote because candidates must distinguish themselves from their co-partisans and appeal to voters on some basis other than a party label (Bowler and Farrell 1993, Farrell and McAllister 2004). It can also lead voters to vote more sincerely—defined by Downs as choosing the candidate whose policy positions are closest to one's own policy positions—because more candidates have a chance of winning election than under a plurality system and voters do not

[3] In elections for the French National Assembly, for instance, candidates must achieve at least 12 percent of the vote in the initial round to make it onto the second ballot.

[4] There is an on-going debate in the literature over whether IRV truly does alleviate ethnic conflict in highly divided societies; Fraenkel and Grofman (2004, 2006a, 2006b, 2007) hold that it does not, while Horowitz (2004, 2006, 2007) contends that it does.

have to worry as much about "wasting" a vote on a candidate who has no chance of winning the election (Duverger 1954, Downs 1957). A final benefit of IRV is that it can reduce the costs of administering elections because it eliminates the need for a primary election or a second round of balloting, thus negating the need to hold multiple elections to determine the winner for an office.

There are several groups that advocate the wide-spread adoption of IRV in the United States, mainly think tanks and policy advocacy groups such as FairVote (Jerdonek 2006) and its predecessor the Center for Voting and Democracy (Richie, Kleppner, and Bouricius 2000), the Opportunity 08 project at the Brookings Institution (Porter 2007), and several state chapters of the League of Women Voters and Common Cause. The rationale these groups give for advocating IRV includes the tendency to elect more moderate candidates and discourage extreme candidates or points of view, the likelihood of minor parties becoming more competitive, and a reduction in the likelihood that a "spoiler" candidate will split the majority party vote and lead to the election of a less-desirable candidate.

However, there are also problems associated with implementing IRV elections in the United States. First, voters whose preferences are exhausted, in that all their preferred candidates are eliminated from the race, essentially do not have their votes counted in an IRV election. Thus, IRV may violate the "one person, one vote" ethic that is ingrained in voting laws and Supreme Court precedent. In addition, IRV ballot counting is far more complicated than the plurality system that is currently employed. Under the plurality system the winning candidate can be determined by simple arithmetic; IRV balloting requires a more complex set of calculations. Though computer programs can easily tabulate the winner in an IRV system, the way that the winner of the election was chosen may not be so apparent to the voters themselves. In addition,

some of the voting systems in use in some election jurisdictions are not designed to handle IRV elections.

Adopting IRV elections in the United States on a widespread basis would require a fundamental shift in the way that elections are administered and the way that voters express their preferences in elections. Because an IRV election can accommodate any number of candidates and eliminates the need for more than one round of voting, primary elections would no longer be necessary. Though this would allow election officials to put all of their limited monetary and human resources towards administrating the general election, it would require major changes to the election calendar, including filing deadlines, campaign finance reporting periods, and campaign schedules. More importantly, implementing IRV would initially incur significant costs in training voters on the new election calendar, how IRV works, how ballots are counted, and how to correctly cast a ballot. Evidence from Canada and from San Francisco indicates that, thus far, election officials have been unsuccessful in this regard, as IRV elections tend to have much higher proportions of rejected ballots and over-votes (Jansen 2004, Neely and Cook 2008).

Thus far IRV has only been tested in small-scale elections with low turnout that consists mostly of dedicated, politically knowledgeable voters; it has not yet been tested in a state or national election in the U.S. In addition, having a larger slate of candidates to choose from and being able to rely less on party identification as a cue would increase the amount of information that voters must gather to be able to cast what they see as an informed vote, thus increasing informational costs on voters and possibly making them less likely to vote (Downs 1957). It is also possible that when voters are unfamiliar with voting equipment or election procedures, they may be more likely to express doubts about the fairness and accuracy of the election. Furthermore, a lack of confidence in elections can have far-reaching consequences for

democratic and civic engagement: "if citizens lack trust or confidence in the process that is used to select those who fill the offices of those institutions of government, it seems unlikely that they will then have trust in the performance of those institutions themselves" (Alvarez, Hall, and Llewellyn 2009). Scholars investigating data from the Comparative Study of Electoral Systems, a survey of voters in 30 countries, have found links between the type of electoral system in place in a country and the attitudes of the voters in that country, particularly in voter efficacy (Karp and Banducci 2006) and satisfaction with democracy and voter satisfaction (Farrell and McAllister 2004).

Voters in the United States are so used to voting and declaring winners under plurality rules—indeed, candidates who do not win an outright majority but still win a plurality of the vote are usually seen as legitimately elected[5]—that it casts doubt on whether IRV is even a necessary reform and calls into question whether candidates elected under IRV rules would be seen as legitimate winners. Adopting this change might harm voter confidence because voters might become disgruntled over changed rules, new voting procedures, and the possibility of an unexpected candidate getting elected to office—and unhappy voters or voters with low levels of confidence in the democratic system are less likely to vote. It is also uncertain whether adopting an IRV system in the United States would change election outcomes much, if at all. In fact, Douglas Rae (1971) has stated, "The Australian [or IRV] system behaves in all its particulars as it if were a single-member district plurality formula"—the electoral system currently used in the United States.

While much of the previous literature has focused on the institutional outcomes of IRV, including who is elected, the number of parties under IRV systems, and other electoral results, I

[5] As an example, several recent presidents have been elected without receiving 50 percent of the popular vote: Richard Nixon in 1968, Bill Clinton in 1992 and 1996, and George W. Bush in 2000.

will instead focus on the influence that IRV can have on voter behavior. I test whether voting under IRV rules rather than plurality rules negatively impacts a voter's sense of electoral fairness and democratic legitimacy using a unique survey experiment.

The Basics of IRV Voting

Instant-runoff voting is a system whereby voters select a winning candidate from among a pool of *N* candidates. Voters in these systems use preferential voting in which they rank candidates in order of the voter's preference for them, from one to *n*. Even though voters assign these rankings, each voter only has one vote to cast. Voters do not have to rank all candidates, but they cannot give the same preference to more than one candidate and they cannot skip numbers in their rankings. Once voters have cast their ballots, the votes are counted and all first preferences are tabulated. If no candidate receives a majority of first-preference votes, then the candidate with the lowest number of first-preference votes is eliminated and the voters who had selected that candidate as their first preference have their votes redistributed to the candidate they had indicated as their second preference. The votes are then tallied again, and if again no candidate has a majority of first preference votes then the candidate with the lowest vote total is again eliminated and the votes redistributed. This process repeats as many times as necessary until a candidate has a majority of the votes and is declared the winner. Figure 1 summarizes this process.

<Figure 1 here>

Table 1 illustrates how this process would work in a mock IRV election for the 2008 Democratic presidential nomination among Barack Obama, Hillary Clinton, and John Edwards. There are nine voters in this election, and so a candidate must receive five first-preference votes

in order to get a majority and be declared the winner. The preferences of these nine voters are shown in the first table for Round 1. Once the first preferences for these nine voters are counted, Obama has four votes, Clinton has three, and Edwards has two. Because no candidate has reached the five-vote threshold, Edwards is eliminated from the race because he received the lowest number of first-preference votes. Voters A and B, who both indicated Edwards as their first preference, have their votes redistributed to their second choice candidates—Clinton and Obama, respectively. The first preferences are tallied again, and now Obama has five votes and Clinton has four. Because Obama has a majority of first-preference votes, he is declared the winner of this election.

<Table 1 here>

As mentioned previously, this system is used mainly in Australia, Fiji, and Papua New Guinea. It is also used to elect the president in Ireland and for electing some members of the British House of Lords. In the United States, it is used in some elections in San Francisco; Oakland, CA; and Minneapolis and St. Paul, MN. IRV has also been tried on a trial basis in local elections in Burlington, VT and Takoma Park, MD. IRV was adopted nationally in Australia in 1918 and has been used in Ireland since 1937. The fact that this system has been used for so long in other countries is evidence that it can effectively work. The question remains, however, whether voters in the United States would be willing to adopt IRV elections and would be satisfied with the outcomes of these elections.

Research Design

To answer the questions that I have raised, I use a survey research design to test two premises: whether an IRV election will elect a different candidate than an election with the same

candidates conducted under the plurality rule, and whether voters' attitudes about elections and democracy will be impacted by voting under IRV rules. The experiment was carried out as part of the Fall 2010 cycle of the Omnibus Political Science Survey (OPSS) conducted by faculty and graduate students in the Department of Political Science at the University of California, San Diego. This survey is administered voluntarily to students enrolled in political science classes; with the class instructor's permission these students are offered extra credit in exchange for their participation, and some modules of the survey provide the students the opportunity to win cash prizes. The survey consists of a variety of questions and experiments that are devised by faculty or graduate students to gather data for their individual research projects, as well as a standard battery of demographic information and questions on political affiliations and attitudes. The study was administered via a computer survey conducted in the Rady Behavioral Lab at the Rady School of Management during October-December 2010, and 151 students participated in the survey. Eighty percent of the participants were undergraduates, with the plurality of these students being juniors, and twenty percent of the participants were graduate students in master's programs.

The respondents who participated in the OPSS were randomly assigned to one of two treatment groups in my module of the survey. The first group was presented with a hypothetical plurality election situation and was asked to choose the candidate they think should be elected: Hillary Clinton, John McCain, Barack Obama, or Mitt Romney. The second group was presented with an IRV election situation with the same four candidates and was asked to rank the candidates according to their preferences.[6] The candidates presented in these situations were

[6] Respondents who were selected to participate in the IRV election scenario were given these instructions: "Vote for candidates by indicating your first-choice candidate, your second-choice candidate and so on. Indicate your first choice by marking the number '1' beside a candidate's name, your second choice by marking the number '2' by that candidate's name, your third choice by marking the number '3,' and so on, for as many choices as you wish. You are

chosen from an actual, recent election to better mimic the actual circumstances under which voters might cast their ballots, and to use candidates who the respondents of the survey would be able to express a true underlying preference for. Sixty-nine students participated in the plurality election treatment and 82 participated in the IRV election treatment. Respondents were not informed about who had won either of the hypothetical elections. After the experimental treatment respondents were asked a series of questions on democratic and electoral legitimacy: they were asked whether they would support a candidate who was elected without a majority of the vote and whether they would support a candidate who they did not vote for but who ended up being elected; they were asked what kind of voting system they would prefer and which voting system would result in the fairest outcome among a majoritarian system, a plurality system, and an IRV system; and whether they were confident that their ballot is counted accurately when they vote and whether the current election process produces fair electoral outcomes.

Using this data, I will test the two questions that I have raised so far in this paper: whether IRV rules would change electoral outcomes and whether IRV rules impact voter attitudes. To answer the first question, I report the results of the experimental plurality and IRV elections presented to the survey respondents. To answer the second question, I formulate several regression models. The independent variable in each of these models will be whether the respondent voted under the plurality or IRV rules, and the dependent variable will be their response to the democratic attitude questions described above. All regression models include

free to rank only one candidate, but ranking additional candidates cannot help defeat your first-choice candidate. Do not mark the same number beside more than one candidate. Do not skip numbers." These instructions were taken from FairVote's sample statutory ballot language that they recommend for use in IRV elections.

controls for respondents' demographics (their gender, ethnic background, and income) and political factors (party affiliation, ideology, political interest, and voting history).[7]

Findings

I first address the question of whether an election conducted under IRV rules would elect a different candidate than an election conducted under the plurality rules that are currently in place in most elections in the United States. Tables 2 and 3 summarize the results of the two election situations posed to survey respondents. Under both the IRV and plurality rules Barack Obama won—in the plurality election he garnered just over half the votes, meaning that he won both a plurality and a majority of the votes, and in the IRV election he won more than half of first-preference votes in the first round, making a run-off unnecessary. However, this alone is not enough to conclude that IRV and plurality rules elect the same candidates. Obama's popularity among young voters is well-known—he garnered a high percentage of the youth vote during the 2008 presidential election, and many young voters still support him strongly—and Obama's strong support among both experimental treatments may have been a product of this occurrence. I plan to run this same experiment again with a different set of candidates to get a better sense of whether changing electoral rules really would lead to different candidates winning an election.

<Tables 2 and 3 here>

The behavior of the voters who participated in the IRV experimental treatment also gives some clues to how voters in an actual election might respond to IRV rules. To begin with, all 67 voters in this treatment assigned a preference to all four candidates in the election. Although the

[7] Because my research question pertains to democratic attitudes among U.S. voters, I only report findings from respondents who are U.S. citizens. Approximately 20 percent of survey respondents were resident or non-resident aliens who generally cannot vote in U.S. elections. Once these non-citizens were removed from the results, 53 respondents had participated in the plurality election treatment and 67 in the IRV election treatment.

instructions for this question stated that respondents did not have to rank more than one candidate to have their vote be valid, they did so anyway. In addition, none of the participants skipped numbers or gave the same rank to more than one candidate when assigning their preferential votes. However, this might again be attributable to the subjects' youth; they are well acquainted with computers and computer surveys and can easily follow a set of instructions. This does not rule out the possibility that older voters or voters who are less familiar with computers might have trouble following the instructions for IRV voting.

This experiment also shows that IRV voters may be willing to cross party lines in assigning their preferential votes. Table 4 shows how often IRV voters changed parties in their first and second candidate rankings, according to their stated party identification.[8] Democrats were far likelier to assign both their first two preferences to two Democratic candidates (that is, rank Clinton and Obama as their first two picks) than Republicans were to assign their first two preference votes to Republicans. Though most respondents did tend to stay with one party, a total of eighteen participants—one-quarter of those who participated in the IRV experimental treatment—split their first two preferences between Republican and Democratic candidates. This party switching is evidence in favor of IRV's ability to encourage voters to vote their true preferences because there is less chance of "wasting" their vote. However, the small sample size on this question prevents me from drawing any statistically significant conclusions.

<Table 4 here>

I now address the second question I raised earlier, whether the type of electoral system a voter votes under has an impact on their democratic attitudes and whether they are confident that the election is fair and accurate. To test this, I conducted a series of multinomial logit regression

[8] For purposes of this table, self-identified Independents and those who answered with some other party (examples include Green Party, Anarchist, Libertarian, Progressive, Global Citizen, Democratic Socialist, or simple "NA") are included in the same category.

models and logit regression models (depending on whether the dependent variable was categorical or ordinal—this is documented in the notes accompanying each table) with the attitudinal questions described in the Research Design section of this paper. The independent variable in each of these models is a dummy variable measuring whether the respondent participated in the plurality election or the IRV election scenario; the plurality election is the baseline in each of these tables.

In addition, I control for a multitude of factors that may influence a person's political attitudes and confidence in democracy. First, I control for typical demographic factors including the respondent's race, income, gender, and year in school.[9] Past research has shown these factors to affect political and civic engagement and political attitudes (see Wolfinger and Rosenstone 1980; Abramson 1983; Brewer and Sigelman 2002; Alvarez, Hall, and Llewellyn 2009). I also account for whether the respondent is majoring in political science or a related field (such as international relations or one of UCSD's area studies programs, such as the School of International Relations and Pacific Studies or the Center for Iberian and Latin American Studies). Lastly, I account for a host of political factors: the respondent's party identification, their ideology, their level of political interest, how much attention they pay to political campaigns, and how much they cared about the outcome of the 2008 presidential race. Taken together, these variables paint an accurate picture of how voters formulate their political attitudes; each of the models has a pseudo R^2 value of between 0.0885 and 0.2043. Though I

[9] Because all respondents are university students between the age of 18 and 25, it was not necessary to control for age.

asked several questions on attitudes and electoral confidence, I do not report the results of some statistically insignificant models in this paper.[10]

I first examine whether respondents would support a candidate who was not elected with a majority of the vote. Table 5 reports the findings from this multinomial logit model. The dependent variable in this model has three categories: respondents could answer that they would support the candidate, that they would support the candidate if the candidate was elected fairly, or that they would not support the candidate. The baseline category shown in this table is supporting the candidate. There was no statistically significant difference between the baseline of fully supporting the candidate and the second category of supporting the candidate with reservations; this is not surprising, as there is little substantive difference between these two categories. However, there is a statistically significant difference between supporting the candidate and not supporting the candidate in terms of voters who participated in the IRV election scenario. Voters in the IRV election were more likely to respond that they would not support a candidate who was not elected with a majority of the vote; this difference is significant at the $p < 0.05$ level. Although current electoral rules in the U.S. only require a candidate to achieve a plurality of the vote in order to win, it could be that the IRV election rules in this experimental treatment called attention to the fact that a winning candidate in this type of election may not receive a majority of the vote. Since the prevailing norm is that a candidate should receive a majority of the vote, an IRV election scenario where a candidate does not do this and still wins could be dissatisfying to voters. Considering the small sample size of this experiment, this is an encouraging result and provides evidence that electoral rules can have a marked effect on voters' political attitudes.

[10] Three statistically insignificant models are not reported in this paper: whether the respondent would support a candidate who was elected without the respondent's vote, which type of electoral system the respondent prefers, and which type of electoral system the respondent thinks is most fair.

<Table 5 here>

I also asked voters two questions dealing with how confident they were that their ballot was counted accurately in an election and how confident they were that the electoral process produces fair outcomes. Overall, respondents were fairly confident in these two pillars of democracy—85 percent of respondents were very confident or somewhat confident in the accuracy of the ballot-counting process, and 77 percent were very confident or somewhat confident that elections produce fair outcomes. However, further examination of these questions reveals nuances in these confidence levels. Table 6 reports the findings of two logit models that use these two questions as dependent variables.

<Table 6 here>

Model 1 in this table tests the level of confidence that respondents have that their ballot is counted correctly. The independent variable is statistically significant at the $p < 0.15$ level—not significant by industry standards, but encouraging given the small sample size of the experiment. In addition, the high R^2 value gives me confidence that I have the correct control variables in place to account for electoral confidence. This model gives preliminary indications that voting under IRV conditions makes respondents more likely to report that they are not confident that their ballots are being counted correctly. This is not surprising, given that counting IRV ballots requires a series of complicated calculations to arrive at the winning candidate, calculations that are not necessary in plurality or majoritarian elections. Model 2, which measures whether respondents are confident that the electoral process is fair, is unfortunately not statistically significant. This is an interesting finding, given the results from Table 5 that indicate that voters would be less likely to support a candidate who was elected with less than a majority of the vote. It stands to reason that if voters do not agree with an electoral system that routinely elects

candidates with less than a majority of the vote, that they would be less confident that an IRV electoral system produces fair outcomes.

Discussion and Conclusions

Despite the small sample sizes in this study, these results I have presented provide evidence that IRV election rules do have some impact on voter's political attitudes and behaviors. Even though IRV rules may not change electoral outcomes, it may encourage voters to vote for members of a political party that they might otherwise not want to waste their vote on in a plurality election. However, it can make voters less confident that their ballots are being counted accurately and make them less likely to support candidates who were elected with less than a majority of the votes.

Despite the support that some interest groups give IRV and its proven successes in other countries, there are many drawbacks to such a system in the United States besides those that I have highlighted here. First, it is much harder to count IRV ballots than it is to count plurality election ballots. Many electoral jurisdictions require a hand recount if the election result is close and a hand recount of IRV ballots would take much longer than a recount with plurality or IRV ballots, as all of the voter's preferences must be registered and tabulated so that run-off rounds can be instituted if necessary. In addition, adopting IRV elections would require a fundamental shift in how voters view elections. The current election calendar in use involves primary elections happening in the first half of the year in which partisan nominees are selected, and then in November the nominees compete directly against each other in the general election. There are two separate campaign seasons in which candidates compete. This election calendar has been in place for decades. IRV elections would consolidate those primary and general elections into a

single election, requiring changes for both voters and candidates. Voters would have to change when they go to the polls to vote and how many candidates they can cast votes for. Candidates would have to reformulate their electoral strategies to account for running against candidates of both their own party and other parties in a single election. Election officials would also have to recreate the election calendar, including candidacy filing deadlines, campaign finance filing deadlines, poll worker training and recruitment, and other tasks. It is not clear whether the costs of adopting IRV would be offset by the gains in lower election costs and greater electoral competition.

As I have mentioned previously, IRV has been adopted in some jurisdictions in the United States, with mixed results. It was adopted by ballot initiative in San Francisco in 2002 with the hopes that it would break two-party dominance and save on election administration costs. However, many of the races decided by IRV ballot never needed to go past the first round of voting, and there is no evidence that the budget of the San Francisco election office has decreased since IRV was adopted.[11] San Francisco's voting system also restricts voters to only expressing preferences for their top three choice in a race; election officials claimed that this restriction was in place because current voting technology would not allow voters to rank multiple candidates without producing "an unwieldy and bewildering ballot."[12] A lawsuit was filed over this restriction, but a federal judge upheld the system in April 2010. A grand jury report released in July 2008 reported that, even after four years of IRV elections, many voters still did not understand the IRV system,[13] and a report generated by the non-partisan Electionline.org found that voter confusion was straining the capacity of the San Francisco

[11] http://www.sfgate.com/cgi-bin/blogs/kalw/detail?entry_id=86358.
[12] http://articles.sfgate.com/2010-04-20/bay-area/20856835_1_instant-runoff-voting-voting-system-instant-runoffs
[13] http://www.sfsuperiorcourt.org/Modules/ShowDocument.aspx?documentid=1978

election officials.[14] In Burlington, Vermont, voters in 2005 voted to adopt IRV to elect their mayor and ensure that the mayor had the support of at least half of the voters. The first mayoral election under IRV rules, in 2006, resulted in the Progressive candidate winning on the second round of ballot counting. In the 2009 election, the Progressive candidate won re-election on the third round of balloting but had not been the plurality winner in the first round. This caused some amount of controversy and led Burlington voters to repeal IRV in March 2010 by a vote of 52% to 48%.[15] However, IRV is still in use in other local elections in the U.S., such as Berkeley and Oakland, California; Minneapolis and St. Paul, Minnesota; Takoma Park, Maryland; Cary and Hendersonville, North Carolina; and Memphis, Tennessee.

There is much more room for research in the area of the impact of electoral rules on voter behavior and attitudes. Further data collection for my study is under way and will use different candidates for the experimental elections. I also plan to test other democratic attitudes and perhaps use a stronger treatment effect, as well as testing other types of electoral systems. Future versions of this paper will also examine how IRV works in other countries, including how many candidates voters rank and what kind of drop-off occurs, how these jurisdictions have helped their voters learn to use IRV, whether rankings are publicly released to assuage voters' concerns about transparency, and what levels of voter satisfaction are reported in these jurisdictions.

[14] http://www.votetrustusa.org/index.php?option=com_content&task=view&id=2639&Itemid=113
[15] http://www.vpr.net/news_detail/87889/

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Figure 1: Process of Counting Ballots in Instant-Runoff Voting Election

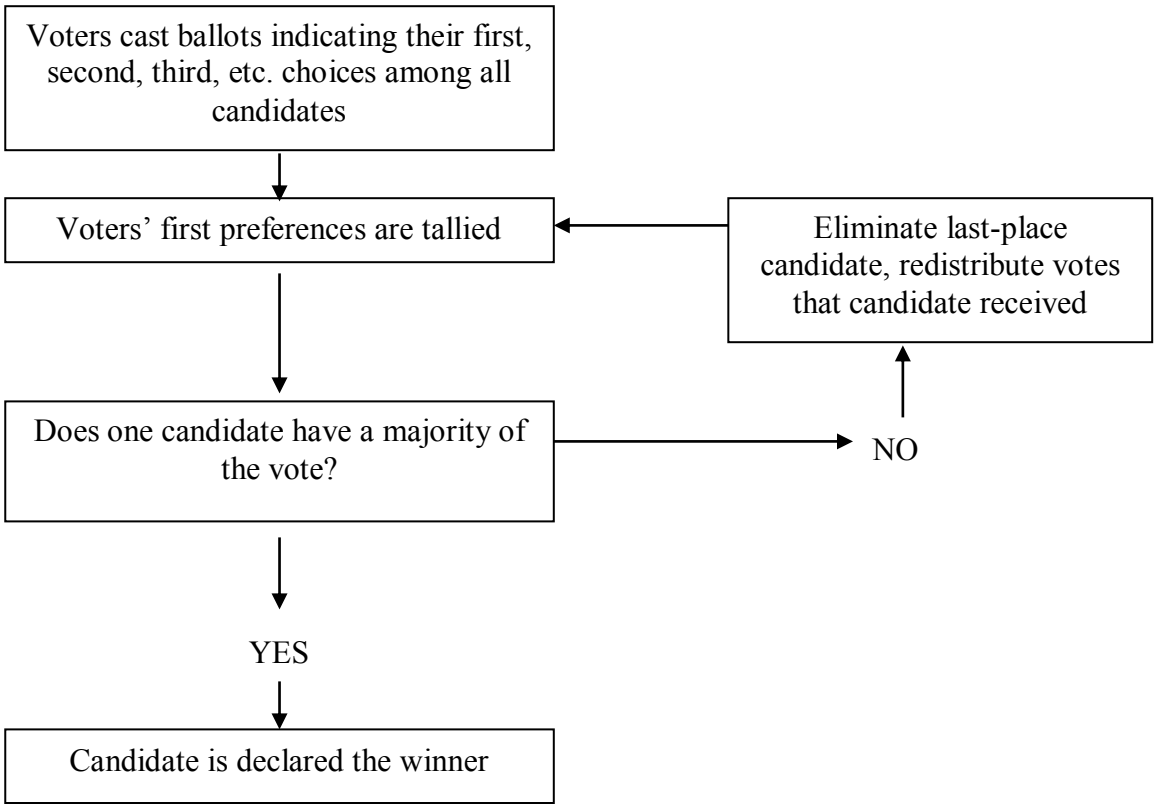

Table 1: Vote Counting Process for Mock Instant-Runoff Voting Election

Round 1

	Voters								
	A	B	C	D	E	F	G	H	I
Obama	3	2	3	3	1	1	3	1	1
Clinton	2	3	1	1	2	3	1	2	3
Edwards	1	1	2	2	3	2	2	3	2

	Totals
Obama	4
Clinton	3
Edwards	2

Round 2

	Voters								
	A	B	C	D	E	F	G	H	I
Obama	2	1	3	3	1	1	3	1	1
Clinton	1	2	1	1	2	3	1	2	3
~~Edwards~~									

	Totals
Obama	5
Clinton	4
~~Edwards~~	

Table 2: Results of Plurality Election

Candidate	*Number of Votes*	*Percentage of Vote*
Hillary Clinton	10	18.87
John McCain	10	18.87
Barack Obama	27	50.94
Mitt Romney	6	11.32
Total	53	100.0

Table 3: Results of Instant-Runoff Voting Election

Candidate	*1st Preference Votes*	*2nd Preference Votes*	*3rd Preference Votes*	*4th Preference Votes*
Hillary Clinton	16	34	9	8
John McCain	14	7	25	21
Barack Obama	35	19	10	3
Mitt Romney	2	7	23	35
Total	67	67	67	67

Table 4: Party Switching Among IRV Election Voters

Party Identification	*Stay Dem*	*Dem to Rep*	*Rep to Dem*	*Stay Rep*	*Total (N)*
Democrat	91.67	8.33	0.00	0.00	36
Independent/Other	45.00	20.00	20.00	15.00	20
Republican	9.09	9.09	54.55	27.27	11

Table 5: Would Respondent Support Candidate who was not Elected with Majority of the Vote?

	Would support with reservations		Would not support		
	Coef.	*S. E.*	*Coef.*	*S. E.*	
Respondent participated in IRV treatment	0.243	0.518	1.952	0.838	**
Respondent is Republican	-0.194	0.878	2.729	1.397	*
Respondent is Democrat	0.183	0.686	1.186	1.146	
Ideology	-0.161	0.215	-0.187	0.318	
Political interest	0.472	0.480	1.353	0.627	**
How much attention respondent pays to political campaigns	-0.025	0.503	-1.042	0.693	
Respondent cared about the 2008 election	-0.451	0.952	-0.005	1.241	
Respondent's race	-0.034	0.558	-0.245	0.789	
Respondent's income	-0.012	0.118	0.158	0.155	
Respondent is female	0.820	0.545	2.040	0.832	**
Respondent is poli. sci. major	-0.717	0.813	-1.550	0.962	
Year in school	0.159	0.144	-0.188	0.207	
Constant	0.578	1.892	-2.958	2.714	
N	106				
Pseudo R^2	0.1579				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Multinomial logit model. Baseline category for this model is supporting the candidate.

Table 6: Respondents' Confidence in Accuracy and Fairness of Election

	Model 1 Confidence that ballot is counted correctly			Model 2 Confidence that electoral process is fair		
	Coef.	*S. E.*		*Coef.*	*S. E.*	
Respondent participated in IRV treatment	1.136	0.783		-0.204	0.580	
Respondent is Republican	2.328	1.594		1.222	1.289	
Respondent is Democrat	-0.211	0.981		1.092	0.963	
Ideology	-0.822	0.394	**	-0.574	0.322	*
Political interest	0.572	0.559		-0.422	0.547	
How much attention respondent pays to political campaigns	-0.241	0.612		1.212	0.578	**
Respondent cared about the 2008 election	-0.452	1.263		0.675	0.916	
Respondent's race	-0.754	0.790		0.232	0.649	
Respondent's income	-0.164	0.159		-0.094	0.127	
Respondent is female	1.311	0.877		0.312	0.644	
Respondent is poli. sci. major	-0.437	0.890		-0.349	0.756	
Year in school	0.031	0.167		0.125	0.143	
Constant	-0.493	2.393		-2.822	2.087	
N	106			105		
Pseudo R^2	0.2043			0.1726		

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Two logit models are reported here. The baseline category for each model is being very or somewhat confident; alternate category is being not too confident or not at all confident.